

# 1. PATENT ABSTRACTS OF JAPAN

(11)Publication number : **10-108875**

(43)Date of publication of application : **28.04.1998**

(51)Int.Cl.

**A61F 7/08**

**F24J 1/00**

(21)Application number : **08-281645**

(71)Applicant : **NAGAO TAKAAKI**  
**TAKAHASHI TOSHIKO**

(22)Date of filing : **04.10.1996**

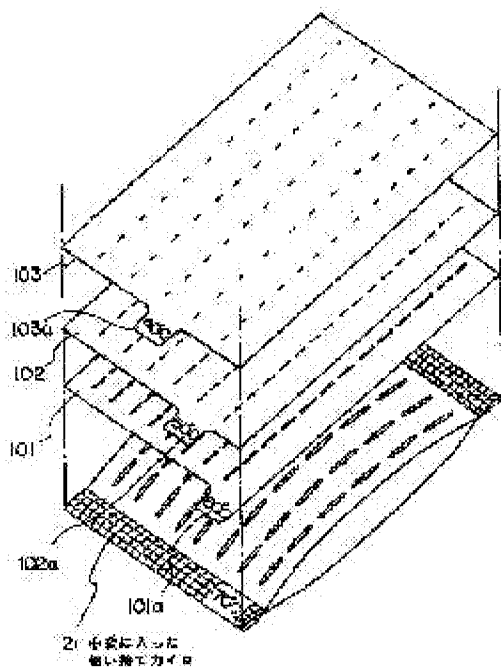
(72)Inventor : **NAGAO TAKAAKI**

## (54) EXPENDABLE BODY WARMER AND ITS CONTAINER

(57)Abstract:

**PROBLEM TO BE SOLVED:** To reduce the danger of inflicting a low-temperature burn on a user by heating an expendable body warmer at the desired low temperature with a simple and inexpensive structure.

**SOLUTION:** Multiple covers 101-103 different in air permeability are stuck on the surface of an inner bag 2 into a laminated state in the order of larger air permeability so that they can be easily peeled off by a hand put on their projections 101a-103a. The heating temperature of a heating element can be changed by the number of the covers 101-103 peeled off at the time of use.



JP,10-108875,A

**\* NOTICES \***

**JPO and INPIT are not responsible for any damages caused by the use of this translation.**

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

**CLAIMS**

---

[Claim(s)]

[Claim 1]In a disposable body warmer by which an oxidation heating body was inserted in a bag (this is called an inside bag) which has breathability, a main part was constituted, and this main part was enclosed with an air-impermeable outer bag, In the state of separating easily by having the lobe and pulling by hand covering which has breathability different, respectively in the surface of said inside bag. A disposable body warmer, wherein the breathability is provided with a means to make exothermic temperature of said heating element change by number of sheets of said covering which is pasted together to laminate shape two or more sheets at descending, and is removed at the time of use.

[Claim 2]An oxidation heating body is inserted in a bag (this is called an inside bag) which has breathability, and a main part is constituted, In a container of a saccate disposable body warmer which takes out a disposable body warmer enclosed with an air-impermeable outer bag from said outer bag at the time of use, and stores it, this main part constitutes said container from a saccate container which has breathability, and. In the state of separating easily by having the lobe and pulling covering with breathability different, respectively by hand. A container of a disposable body warmer with which the breathability is characterized by making exothermic temperature of said heating element change by number of sheets of said covering which is pasted together to laminate shape on the surface of a two or more sheet aforementioned bag-like container at descending, and is removed at the time of use.

[Claim 3]A means to change breathability with said two or more coverings, respectively, A disposable body warmer and its container the 1st paragraph of a claim having composition which makes small a size of a vent hole of plurality or the singular number established in each covering located in the respectively same position by pasting together to said laminate shape as it becomes a surface, or given in the 2nd paragraph.

[Claim 4]Selectively the surface of said inside bag or said saccate container covering of wrap air-impermeability, A disposable body warmer provided with a means to change a size of a breathability portion exposed by number of sheets of said covering which is pasted together two or more sheets and removed in the state of separating easily, by pulling by hand with the lobe at the time of use, and to make exothermic temperature of said heating element change, or its container.

[Claim 5]A disposable body warmer or its container of the 1st paragraph of a claim - the 4th

paragraph statement forming a means to display exothermic temperature in which said heating element generates heat in the state where said covering which was united with this lobe is stuck on said lobe.

## DETAILED DESCRIPTION

---

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to a disposable body warmer and its container.

[0002]

[Description of the Prior Art] Although various kinds of sizes and the thing of shape exist, while there is breathability of 5.5 cm x about 9 cm, as for the disposable body warmer, the oxidation heating body used as the raw material is packed up with the small type by the bag in iron powder, water, wood flour, activated carbon, salt, etc., as known well.

The outside is covered in the plastic bag.

And as shown in drawing 5, by tearing the plastic bag 1 and taking out an inside bag (disposable body warmer main part), while having breathability, air (oxygen) advances from a bag, and a heating element generates heat by this. Therefore, the portion will be heated by equipping the portion which wants to warm the body.

[0003] As mentioned above, the conventional disposable body warmer takes out and uses the main part packed up by the bag, while the plastic bag in which air does not permeate is torn and breathability has the whole, but. In a structure [ where the whole inside bag has fixed breathability ] sake, the exothermic temperature and its temporal duration will become settled uniquely by the performance and capacity of a heating element. For example, in the above-mentioned small thing (5.5 cm x about 9 cm), it is maximum-temperature 70degreeC, mean-temperature 58degreeC, and about temporal duration 6 hour.

[0004] However, although the exothermic temperature for which it asks changes with every person of the, an operating condition, and use parts (warming part) and regulation of exothermic temperature is needed, For Cairo itself, since temperature control is easily impossible, the conventional disposable body warmer twists the towel etc. which were prepared independently, is the method of suppressing and using penetration of air, and is adjusting the exothermic temperature.

[0005]

[Problem(s) to be Solved by the Invention] There is a problem that regulation of exothermic temperature is not easy for the conventional disposable body warmer as mentioned above. For this reason, although exothermic temperature is adjusted by twisting the towel etc. which were prepared independently as mentioned above, this is troublesome and there is a problem that adjusting to the temperature for which it asks is not easy. He does not notice this, even if it becomes a considerable elevated temperature, since the disposable body warmer cannot feel the heat easily at the time of the beginning of using and exothermic temperature rises gradually during use, There was a danger that a user got injured, and since temperature control was impossible, there were problems, like it is not only user-unfriendly for a user, but there is a possibility of doing an obstacle.

[0006] It is made in order that this invention may solve this problem, and it aims at providing the disposable body warmer which can adjust service temperature, and its container with simple and

cheap composition.

[0007]

[Means for Solving the Problem]A disposable body warmer concerning this invention is in a state of separating easily by having the lobe and pulling by hand covering which has breathability different, respectively in the surface of an inside bag, The breathability was provided with a means to make exothermic temperature of said heating element change by number of sheets of said covering which is pasted together to laminate shape two or more sheets at descending, and is removed at the time of use.

[0008]In a container of a disposable body warmer, constitute said container from a saccate container which has breathability, and. In the state of separating easily by having the lobe and pulling covering with breathability different, respectively by hand. Exothermic temperature of said heating element is made to change by number of sheets of said covering which the breathability pastes together to laminate shape on the surface of a two or more sheet aforementioned bag-like container at descending, and removes at the time of use.

[0009]A means to change breathability with said two or more coverings, respectively considered a size of a vent hole of plurality or the singular number established in each covering located in the respectively same position by pasting together to said laminate shape as composition which makes it small as it became a surface.

[0010]Selectively the surface of said inside bag or said saccate container covering of wrap air-impermeability, It had a means to have changed a size of a breathability portion exposed by number of sheets of said covering which is pasted together two or more sheets and removed in the state of separating easily, by pulling by hand with the lobe at the time of use, and to make exothermic temperature of said heating element change.

[0011]A means to display exothermic temperature in which said heating element generates heat in the state where said covering which was united with this lobe is stuck on said lobe was formed.

[0012]Therefore, desired exothermic temperature is obtained, and a disposable body warmer of this invention or its container can know the exothermic temperature easily, and can lessen danger, such as a low temperature burn, because a user removes said covering at the time of use in the number of request sheets.

[0013]

[Embodiment of the Invention]Hereafter, the embodiment of this invention is described using a drawing. Drawing 1 is an exploded perspective view for explaining the disposable body warmer of this invention, and the disposable body warmer main part which an inside bag comes to put to 2 into a heating element in a figure, and 101-103 are coverings which have different breathability, respectively, The breathability is a bag in 103<102<101<. It is an adhesion means which separates easily by being set up in order and pulling the handle parts (lobe) 101a-103a by hand, respectively, When it is the inside bag 2, in the covering 101, after the covering 101, the covering 103 is stuck on laminate shape on the covering 102, and the covering 102 changes. as the construction material of the coverings 101-103 can use vinyl, cellophane, etc. and a means to change breathability is shown, for example in drawing 1, many holes are provided so that the hole where sizes differ in the respectively same position may be in agreement -- it may constitute. It is put into drawing 3 (A) by the plastic bag 1 (outer bag) as shown the state at the time of marketing on which even the covering 103 was stuck and shown in drawing 5 in this state.

[0014]Next, operation is explained. A user tears the plastic bag 1 at the time of use, and takes out the disposable body warmer of this invention from the plastic bag 1. It takes and comes out and, in the bottom, \*\* will be in the state of drawing 3 (A). Next, a user removes the covering to the layer for which it asks, in order to set up desired exothermic temperature. The exothermic temperature for which it asks by using it in order to prevent the cold of the body for whether a disposable body warmer is used in very cold land, such as a service space, i.e., a mountain in the winter etc., at home etc. differs. Even when using it in order to prevent the cold of the body at the same home, the temperature for which it asks according to the age and the body temperature difference of those who use it differed, but the conventional disposable body warmer did not have a mechanism in which the exothermic temperature was adjusted in the Cairo itself. The disposable body warmer of this invention has composition which can adjust exothermic temperature by removing the covering to the layer which asks for the coverings 101-103 stuck on two or more layers.

[0015]That is, where even the low covering 103 of breathability is stuck most, average exothermic temperature is set as about 40 degreeC, for example, if it has that handle part 103a in a hand in this state and the covering 103 is removed, for a while, the good covering 102 of breathability will be exposed to the surface, and average exothermic temperature will be set as about 50 degreeC. If it furthermore removes with that handle part 102a in this state, the good covering 101 of breathability will be more exposed, and average exothermic temperature will be set as 60 degreeC, If it furthermore removes with the handle part 101a, the breathability which is a grade of which an inner heating element does not jump out will be in the greatest state, and the average exothermic temperature will be set to 70 degreeC, for example. Therefore, a user will only remove some breathability coverings to the temperature for which the temperature displayed on the handle parts 101a-103a at outline temperature asks, and the exothermic temperature for which it asks will be obtained.

[0016]Drawing 2 and drawing 3 (B) are the figures showing other embodiments of this invention, and when generation of heat does not become local by improvement of a heating element, etc., they are good as for one in the hole for making breathability change. Drawing 4 is a figure showing the embodiment of further others, and, on the whole, covering in which breathability differs is not laminated, It has composition which piles up the wrap coverings 401-404 on the surface of the disposable body warmer 2 selectively, and sticks the surface on it, It will be in the state of having breathability to the portion of length (b) by pulling the handle part 401a and removing the covering 401, and the length of the portion which has breathability by removing with 402,403,404 one by one will enable regulation of the exothermic temperature by expanding to (\*\*) - (\*\*).

[0017]Although the above-mentioned embodiment had composition which sticks covering which can be removed on the surface of the disposable body warmer 2, the effect same also as composition which sticks the above coverings on another saccate container which stores a disposable body warmer is acquired (not shown). Namely, since a disposable body warmer has the request to to make it generate heat to the temperature for which it asks as quickly as possible at the time of the beginning of using, At the time of the beginning of using, if take out the disposable body warmer main part 2 from the plastic bag 1 of drawing 5, rub by hand, it is made to generate heat to prescribed temperature and it generates heat to prescribed temperature, the usage which stores in the container of this embodiment and makes generation of heat at desired low temperature continue can do.

[0018]

[Effect of the Invention]It is effective in generation of heat with the desired degree of low temperature being acquired with composition simple [ the disposable body warmer of this invention, and its container ], and cheap, as explained above. Therefore, danger, such as inflicting a low temperature burn on a user, can be lessened. Since exothermic temperature can be adjusted, when exothermic duration time can also be adjusted and the remainder decreases in a travel destination etc., there is an effect of being able to make it last long at low temperature etc.

## TECHNICAL FIELD

[Field of the Invention]This invention relates to a disposable body warmer and its container.

## PRIOR ART

[Description of the Prior Art]Although various kinds of sizes and the thing of shape exist, while there is breathability of 5.5 cm x about 9 cm, as for the disposable body warmer, the oxidation heating body used as the raw material is packed up with the small type by the bag in iron powder, water, wood flour, activated carbon, salt, etc., as known well.

The outside is covered in the plastic bag.

And as shown in drawing 5, by tearing the plastic bag 1 and taking out an inside bag (disposable body warmer main part), while having breathability, air (oxygen) advances from a bag, and a heating element generates heat by this. Therefore, the portion will be heated by equipping the portion which wants to warm the body.

[0003]As mentioned above, the conventional disposable body warmer takes out and uses the main part packed up by the bag, while the plastic bag in which air does not permeate is torn and breathability has the whole, but. In a structure [ where the whole inside bag has fixed breathability ] sake, the exothermic temperature and its temporal duration will become settled uniquely by the performance and capacity of a heating element. For example, in the above-mentioned small thing (5.5 cm x about 9 cm), it is maximum-temperature 70degreeC, mean-temperature 58degreeC, and about temporal duration 6 hour.

[0004]However, although the exothermic temperature for which it asks changes with every person of the, an operating condition, and use parts (warming part) and regulation of exothermic temperature is needed, For Cairo itself, since temperature control is easily impossible, the conventional disposable body warmer twists the towel etc. which were prepared independently, is the method of suppressing and using penetration of air, and is adjusting the exothermic temperature.

## EFFECT OF THE INVENTION

[Effect of the Invention]It is effective in generation of heat with the desired degree of low temperature being acquired with composition simple [ the disposable body warmer of this invention, and its container ], and cheap, as explained above. Therefore, danger, such as inflicting a low temperature burn on a user, can be lessened. Since exothermic temperature can

be adjusted, when exothermic duration time can also be adjusted and the remainder decreases in a travel destination etc., there is an effect of being able to make it last long at low temperature etc.

## TECHNICAL PROBLEM

---

[Problem(s) to be Solved by the Invention] There is a problem that regulation of exothermic temperature is not easy for the conventional disposable body warmer as mentioned above. For this reason, although exothermic temperature is adjusted by twisting the towel etc. which were prepared independently as mentioned above, this is troublesome and there is a problem that adjusting to the temperature for which it asks is not easy. He does not notice this, even if it becomes a considerable elevated temperature, since the disposable body warmer cannot feel the heat easily at the time of the beginning of using and exothermic temperature rises gradually during use, There was a danger that a user got injured, and since temperature control was impossible, there were problems, like it is not only user-unfriendly for a user, but there is a possibility of doing an obstacle.

[0006] It is made in order that this invention may solve this problem, and it aims at providing the disposable body warmer which can adjust service temperature, and its container with simple and cheap composition.

## MEANS

---

[Means for Solving the Problem] A disposable body warmer concerning this invention is in a state of separating easily by having the lobe and pulling by hand covering which has breathability different, respectively in the surface of an inside bag, The breathability was provided with a means to make exothermic temperature of said heating element change by number of sheets of said covering which is pasted together to laminate shape two or more sheets at descending, and is removed at the time of use.

[0008] In a container of a disposable body warmer, constitute said container from a saccate container which has breathability, and. In the state of separating easily by having the lobe and pulling covering with breathability different, respectively by hand. Exothermic temperature of said heating element is made to change by number of sheets of said covering which the breathability pastes together to laminate shape on the surface of a two or more sheet aforementioned bag-like container at descending, and removes at the time of use.

## DESCRIPTION OF DRAWINGS

---

[Brief Description of the Drawings]

[Drawing 1] It is a figure for describing one embodiment of this invention.

[Drawing 2] It is a figure for describing other embodiments of this invention.

[Drawing 3] It is a figure for describing one embodiment and other embodiments of this invention.

[Drawing 4] It is a figure for describing the embodiment of further others of this invention.

[Drawing 5] It is a figure showing an example of the conventional disposable body warmer.

[Description of Notations]

1 BINISU bag

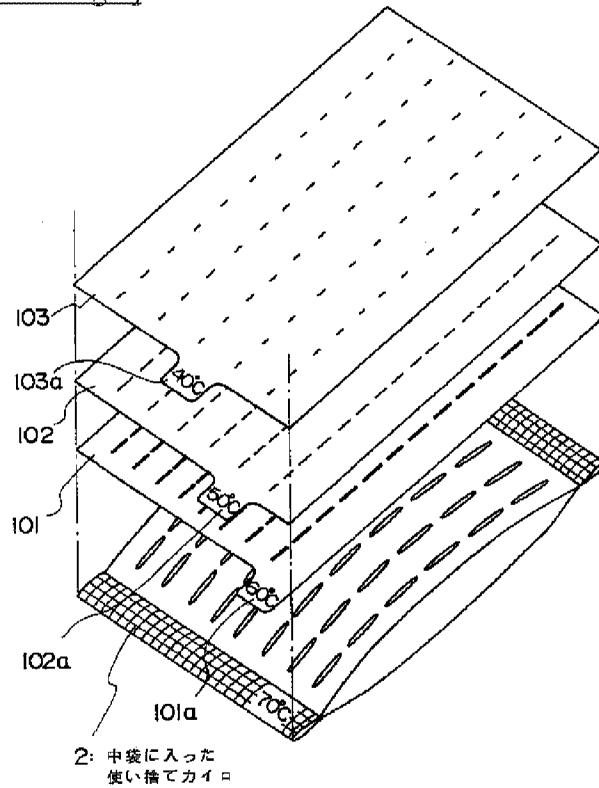
2 The disposable body warmer included in an inside bag

101-103, 201-203, 401-404 It is covering, respectively.

101a-103a, 201a-203a, 401a-404a -- respectively -- the handle part of covering

## DRAWINGS

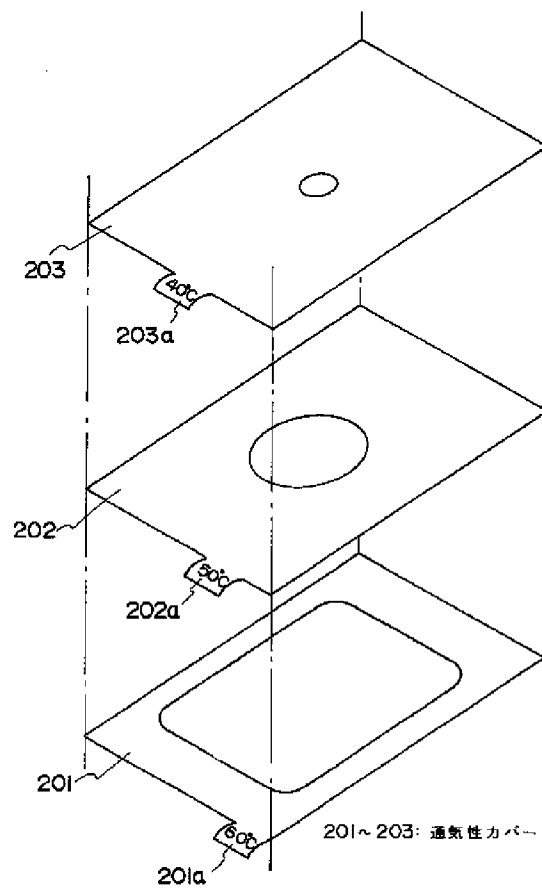
[Drawing 1]



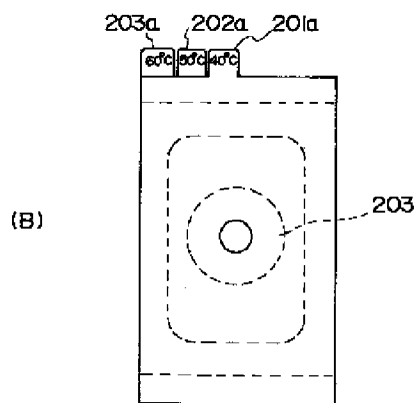
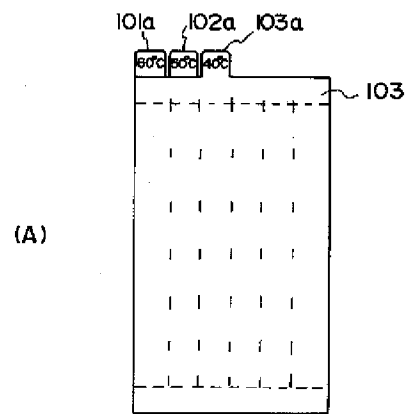
101 ~ 103: 通気性カバー

[Drawing 2]

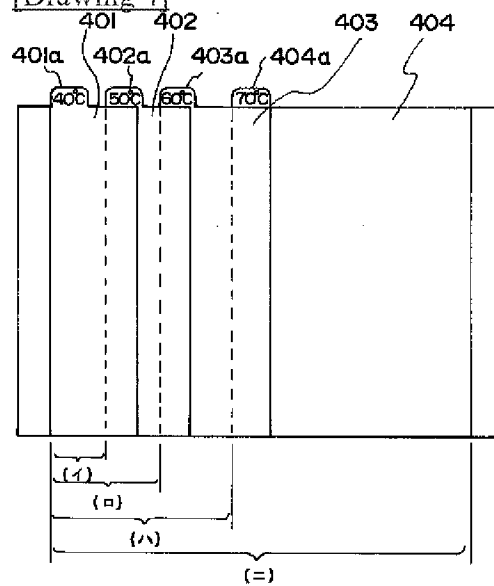




[Drawing 3]



[Drawing 4]



[Drawing 5]

